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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/656,170	09/06/2000	Motoyasu Taguchi	071671/0155	8925
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FOLEY AND LARDNER LLP SUITE 500 3000 K STREET NW WASHINGTON, DC 20007			EXAMINER WANG, TED M	
			ART UNIT 2611	PAPER NUMBER

DATE MAILED: 09/13/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

09/656,170

Applicant(s)

TAGUCHI, MOTOYASU

Examiner

Ted M. Wang

Art Unit

2611

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 25 August 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-4, 6-15 and 17-28 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) 25-27 is/are allowed.
- 6) ☒ Claim(s) 1-4, 6-8, 11-15, 17-19, 22-24 and 28 is/are rejected.
- 7) ☒ Claim(s) 9, 10, 20 and 21 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 06 September 2000 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

## **DETAILED ACTION**

### ***Response to Arguments***

1. Applicant's arguments, filed on 8/25/2006, with respect to the rejection(s) of claim(s) 1-4, 6, 7, 11-15, 17-19 and 22-24 under 35 USC § 103 have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of Takagi et al. (US 6,188,682).
2. The indicated allowability of claim 28 is withdrawn in view of the newly discovered reference(s) to Takagi et al. (US 6,188,682). Rejections based on the newly cited reference(s) follow.

### ***Drawings***

3. The drawings are objected to because
  - Fig. 1, 2 AND 8, change "LAKE CCT." to --- RAKE CCT. ---, respectively.A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

### ***Specification***

4. The disclosure is objected to because of the following informalities:
  - Pages 1-2, change "lake circuit 140" to --- rake circuit 140 ---, respectively.
  - Pages 7, 8, 10 and 11, change "lake circuit 40" to --- rake circuit 40 ---, respectively.

Appropriate correction is required.

***Claim Rejections - 35 USC § 102***

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

6. Claims 1-4, 8, 11-15, 19, 22-24 and 28 are rejected under 35 U.S.C. 102(e) as being anticipated by Takagi et al. (US 6,188,682) (cited on 11/03/2003, form 892).

□ With regard 1, 8, 12 and 19, a receiving terminal for CDMA system comprising:

a finger circuit (Fig.2 elements  $F_{n1}$ - $F_{n4}$ ) having a plurality of finger circuit elements (Fig.2 elements  $F_{n1}$ - $F_{n4}$ ), each of said plurality of finger circuit element for making between a correlation of a received signal from a radio circuit connected to an antenna (Fig. 2 elements 16<sub>1</sub> -16<sub>4</sub>) and a known signal (Fig. 2 elements 14<sub>1</sub> -14<sub>4</sub>) and for outputting a correlated received signal as result of the correlation (Fig. 2 elements 17<sub>1</sub> -17<sub>4</sub> outputs); and

a rake circuit (Fig.2 elements 18, 24, 31 and column 5 lines 1-6) for combining the correlated received signals output from the plurality of finger circuit elements (Fig.2 elements 18 and column 4 line 67 – column 5 line 1);

wherein the rake circuit includes a level judgment circuit (Fig.8 and 9, column 5 lines 22-28, column 5 lines 46-63, column 7 lines 46-67) for executing

electric field level judgment based on the correlated received signals output from the plurality of finger circuit elements (column 5 lines 46-53) and a predetermined threshold level (Fig.8 and 9,  $V_{T2}$  and  $V_{T3}$  ), and

wherein an operation of at least one finger circuit element can be suspended for a fixed, predetermined time period according to the result of the level judgment (column 7, lines 46-67 and column 8 lines 1-23).

- With regarding claims 2, 11, 13, and 22-24:

wherein operation of a control clock supply (timer, column 7 line 9) to the at least one finger circuit element is suspended for a fixed, predetermined period time for power consumption reduction according to the result of the electric field level judgment by the level judgment circuit (column 7, lines 5-18).

- With regarding claims 3 and 14:

wherein operation of a control clock supply (timer, column 7 line 9) to a timing circuit in the at least one finger circuit element is suspended according to the result of the electric field level judgment by the level judgment circuit (column 7, lines 1-18).

- With regarding claims 4 and 15:

wherein operation of a control clock supply is suspended after the lapse of a predetermined period of time (column 7, lines 9-19).

- With regarding claim 28:

wherein the receiving terminal is configured to suspend and operation of only one finger circuit element of the plurality of finger circuit elements for the

fixed, predetermined time period according to the result of the electric field level judgment (column 7 lines 46-59).

***Claim Rejections - 35 USC § 103***

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 6, 7, 17 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Takagi et al. (US 6,188,682) in view of Ishikura (US 5,239,684).

- With regard claims 6, 7, 17 and 18, Takagi et al. and Nakajima et al. disclose all of the subject matter as described above except for specifically teaching a memory which is an E2PROM, and threshold data therefrom is supplied under CPU control to the lake circuit as claimed.

However, Ishikura et al., in the same field of endeavor, teaches a memory (107 in figure 1 and 2), which is an E2PROM, and threshold data therefrom is supplied under CPU (161 in figure 2) control to a circuit (column 4, lines 11-12 and column 8, lines 56-66).

It is well known that the area of an E2PROM cell is about one fifth of the area of a SAR cell so the area required by a given RAM on the semiconductor chip is greatly reduced, or RAM storage capacity can be increased.

Furthermore, E2PROM setting value can be updated easily. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to employ E2PROM as taught by Ishikura to store threshold value of the receiver of Takagi et al. in order to update stored value easily.

- With regard claim 13, which is a system claim related to claim 1, all limitation is contained in claim 1. The explanation of all the limitation is already addressed in the above paragraph.

### ***Allowable Subject Matter***

9. Claims 9, 10, 20, 21, and 25-27 are objected to as being dependent upon an objected claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

10. The following is an examiner's statement of reasons for allowance.

- The prior art fails to teach an apparatus of Claims 25-27 that specifically comprises the following:
  - The instant application is deemed to be directed to a non-obvious improvement over the admitted prior art of the instant application and the invention patented in Pat. No. US 6,363,101, US 5,239,684, and US 5,487,083. The improvement comprises "wherein the rake circuit further includes: a main synthesizer for combining electric field levels of all of the correlated received signals output from the plurality of finger circuit elements; and a sub-synthesizer for combining electric field levels of a subset of the correlated received signals output from the plurality of finger

circuit elements; and wherein the level judgment circuit is configured to execute the electric field level judgment by comparing the predetermined threshold value with a difference between an output of the main synthesizer and an output of the sub-synthesizer." as recited.

### ***Conclusion***

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ted M. Wang whose telephone number is 571-272-3053. The examiner can normally be reached on M-F, 7:30 AM to 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chieh Fan can be reached on 571-272-3042. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Ted M. Wang



Ted M Wang  
Examiner  
Art Unit 2611